

Steen, Aksel S.

Report of the Second Norwegian Arctic expedition in the *Fram*. 1898-1902. No. 6. Terrestrial magnetism. Kristiania. 1907. 82 p. 4°.

Stockigt, Willi.

Ueber den Einfluss der Lage die Temperaturrentwickelung der Sommermonate und die Luftfeuchtigkeit an heißen Tagen im Schwarzwaldgebiet... Inaug.-Diss... Saalfeld. [Jena. 1906.] 72 p. 4°.

Streit, A.

Das Wesen der Cyklonen. Wien. 1906. vi, 125 p. 1°.

Thieme, F. W.

Neues und vollständiges Handwörterbuch der englischen und deutschen Sprache. 18. Auflage vollständig neu bearbeitet von Leon Kellnar. 2 Theile. Braunschweig. 1901-5. xviii, 491; xlii, 597 p. 4°.

Unanue, Hipolito.

Observaciones sobre el clima de Lima... Madrid. 1815. (26), 315 p. 8°.

Walker, James.

The analytical theory of light. Cambridge. 1904. xv, 416 p. 4°.

RECENT PAPERS BEARING ON METEOROLOGY.

H. H. KIMBALL, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —

Bulletin of the American geographical society. New York. v. 39. Apr., 1907.
T., R. S. Calabrian earthquakes. p. 236-237.

Bulletin of the geographical society of Philadelphia. Philadelphia. v. 5. Apr., 1907.

Bennett, Helen Christine. Kingston, the capital of Jamaica, as it was and is. p. 1-9. [Graphic description of the Kingston earthquake, January 15, 1907.]

Smith, Philip S. Settlements and climate of the Seward Peninsula, Alaska. p. 10-20. [Climate of Nome and vicinity.]

Nature. London. v. 75.

MacDowall, Alex. B. Rothesay rainfall and the sun-spot cycle. (Mch. 21, 1907.) p. 488.

— The weather reports of the meteorological office. (Mch. 21, 1907.) p. 488-490.

— The weather and the crops. (Apr. 4, 1907.) p. 545-546. [Abstract of paper by R. H. Hooker.]

Physical Review. Lancaster. v. 24. Mch., 1907.

Turnbull, W. R. Researches on the forms and stability of aeroplanes. p. 285-302.

Science. New York. New Series. v. 25. Apr. 5, 1907.

Wetherill, Henry Emerson. Some new and useful data in reference to the moisture of the air. [Abstract.] p. 523. [Notice of a cobalt hygrometer.]

Gates, Fanny Cook. On the conductivity of the air caused by certain compounds during temperature changes. [Abstract.] p. 528.

Barus, Carl. On distributions of nuclei and ions in dust-free air. [Abstract.] p. 534-535.

Ward, R. DeCourcey. Cumulus clouds over the San Francisco fire. p. 554-555.

Scientific American. New York. v. 96.

Rotch, A. Lawrence. The meteorological conditions above St. Louis. (Mch. 30, 1907.) p. 271.

— A great jam on the Susquehanna River. (Apr. 6, 1907.) p. 288.

Scottish geographical magazine. Edinburgh. v. 23. Apr., 1907.

Newbiggin, I. The Swiss Valais: a study in regional geography. p. 169-191. [Climate, p. 175-183.]

Symons's meteorological magazine. London. v. 42. Mch., 1907.

Innes, R. T. A. Rain gauge exposure in the Transvaal. p. 21-23.

— The British weather reports. p. 23-27. [General description, with notes of changes recently introduced. Announces the inauguration of a monthly weather report.]

Krebs, Wilhelm. Qualitative analysis of curve diagrams. p. 27-28.

— Rain-making experiments in the Klondike. p. 29.

Druce, F. Weather recording. p. 29-31.

Clark, J. Edmund. A relation between rainfall at York and solar cycles. p. 32-33.

Lander, A. The Lander self-recording rain gage. p. 37.

Terrestrial magnetism and atmospheric electricity. Baltimore. v. 11. Dec., 1906.

Oddone, Emilio. Measurements of the electric potential during the total solar eclipse of August 30, 1905, at Tripoli, Barbary. p. 167-180.

— Adam Paulsen (1833-1907). p. 198.

Transactions of the royal society of Edinburgh. Edinburgh. v. 41. Pt. 3. 1904-5.

Chrystal, [George]. On the hydrodynamical theory of seiches. p. 599-649. [Bibliography, p. 644.]

Annuaire de la Société météorologique de France. Paris. 54 année.

Dongier, R. Introduction à l'étude des phénomènes électriques de l'atmosphère. Radioactivité; ions; électrons. (Août 1906.) p. 213-230. [A popular résumé of recent theories of atmospheric electricity.]

Cœurdevache, P. Variation annuelle de la nébulosité. (Août 1906.) p. 235.

Dufour, Ch. Variation diurne de la pression barométrique à Rikitea. (Oct., 1906.) p. 253-257.

Ouzilleau, —. Note sur le climat de Koury (Soudan Français). (Oct., 1906.) p. 257-261.

Dufour, Ch. Températures extrêmes au sommet de la Tour Eiffel (1889-1906). (Oct., 1906.) p. 262-264.

Moureaux, Th. Résumé de 23 années d'observations de l'insolation au Parc Saint-Maur. (Nov., 1906.) p. 269-274.

Chauveau, A. B. Sur le typhon du 18 septembre à Hong-Kong. (Nov., 1906.) p. 274-276.

Maillet, Edmond. Sur la durée de propagation des maxima des crues dans le bassin de la Seine. (Dec., 1906.) p. 285-288.

Besson, L. Recherches expérimentales sur l'orientation des cristaux de glace atmosphériques. (Fév., 1907.) p. 40-50.

Garrigou-Lagrange, P. Pluies, rivières et sources du Limousin. (Fév., 1907.) p. 50-52. [Relations of rainfall to stream flow; experiments under conditions very favorable for observation.]

Bulletin de la Société belge d'astronomie. Bruxelles. 12 année. Mars 1907.

Boutquin, A. De l'emploi des appareils de télégraphie sans fil pour l'observation des courants atmosphériques dans les régions polaires. p. 79-86.

Comptes rendus de l'Académie des sciences. Paris. Tome 144. 18 mars 1907.

Oddone, E. Sur quelques constantes sismiques déduites du tremblement de terre du 4 avril 1904. p. 662-664.

Revue négrophile. Mons. Mars 1907.

Mémery, Henri. La lune "mange-t-elle" les nuages? p. 113-114. [Observations discrediting belief in the moon's effect on clouds.]

B[racke], A. Les nuages de neige cosmiques. p. 114-115. [Review of work by C. Drescher.]

Defant, A[lbert]. Dépendance de la radiation calorifique diffuse de l'époque de l'année. p. 117-120.

Annalen der Hydrographie und maritimen Meteorologie. Berlin. 35 Jahrgang. 1907.

Knipping, E. Der Hongkong-Taifun vom 18 Dezember 1906. p. 97-102.

S., v. Windverhältnisse in Mogadar, der Kamerun-Mündung und der Walfisch-Bucht, mit besonderer Berücksichtigung der täglichen Schwankungen. p. 103-108.

Kaiser, Max. Land- und Seewinde an der deutschen Ostseeküste. p. 113-122.

K., E. Zwei Taifune im Golf von Tonkin am 20 und 24 September 1906. p. 136-137.

Meteorologische Zeitschrift. Braunschweig. Band 24. März 1907.

Pernter, J[oseph] M[aria]. Das Ende des Wetterschiessens. p. 97-102.

Ekholm, Nils. Ueber die unperiodischen Luftdruckschwankungen und einige damit zusammenhängende Erscheinungen. p. 102-113.

Woeikow, A. Temperatur des Ural. —Der Juli und September 1906 in Russland. Das aerodynamische Institut bei Moskau. p. 114-119.

Woeikow, A. Das Baromettermaximum im Januar 1907. p. 120. [Highest pressure ever observed in western Russia.]

H[ann], J[ulius]. Das ausserordentliche Baromettermaximum. p. 121.

E., F. M. Ueber die Theorie der Guilbertschen Regeln der Wettervorhersage von Bernard Brunhes (Arch. d. sciences phys. et nat., 15 July 1906). p. 121-122. [Adverse criticism of Guilbert's rules and Brunhes's discussion of them.]

— Klima von Buitenzorg. p. 124-129.

— Ueber die Eisverhältnisse des Ryck unfern des Greifswalder Bodden. p. 129. [Record 1839-1870.]

Schmidt, Ad. Vorläufige Mitteilung über magnetische Variationsbeobachtungen in einem Bergwerk. p. 130-131.

— Adam Paulsen. p. 138-139.

Exner, Karl. Farbe und Polarisation des Himmelslichtes. p. 139. [An experiment showing color and polarization to be due to the molecules of the air itself.]

Köppen, W. Klassifikation der Klimate. p. 140-142. [Replies to Prof. Ward's criticism of Köppen's classification.]

Hann, J[ulius]. Temperatur von Bombay und Kalkutta. p. 142. [Corrects an error in Hann's Lehrbuch der Meteorologie.]

- Mitteilungen aus den deutschen Schutzgebieten. Berlin. 20 Band.*
 Ottweiler, Emil. Die Niederschlags-Verhältnisse von Deutsch-Südwestafrika. p. 1-84. [A compilation of all available data, including chart of mean annual rainfall and bibliography.]
- Naturwissenschaftliche Rundschau. Berlin. 22 Jahrgang. 21 März 1907.*
 Süring, R. Wilhelm von Bezold. p. 153-155.
- Neueste Erdbeben-Nachrichten. Laibach. Jahrgang 6. 1906-7.*
 Belar, A. Bodenbewegungen und die Stabilität der Bauten. p. 81-85.
- Falsche Erdbebennachrichten. p. 103-105.
- Sitzungsberichte der Königlich preussischen Akademie der Wissenschaften. Berlin. 1907. XII.*
- Warburg, E. and Leithäuser, G. Ueber die Oxydation des Stickstoffs bei der Wirkung der stillen Entladung auf atmosphärische Luft. p. 229-234.
- Weltall (Das). Berlin. 7 Jahrgang. 1907, April 1.*
- Linke, Felix. Vom Staube. p. 193-201.
- Krebs, Wilhelm. Witterungsvoraussicht und Sonnentätigkeit. p. 201-203.
- Wetter (Das). Berlin. 24 Jahrgang. März 1907.*
- Grohmann, —. Die Wettervorhersage auf den Witterungsberichten des Königl. sächsischen meteor. Institutes. p. 49-54.
- Kaiser, Max. Historische Entwicklung unserer Kenntnis der Land- und Seewinde auf der Erde und Darstellung der gegenwärtigen Theorien. p. 54-65.
- Wahlburg, Eduard Schiefer Edler von. Die Antizyklone der letzten Januar-Dekade 1907. p. 68-72.
- Atti della Reale accademia dei Lincei. Roma. v. 15. 1906.*
- Monti, V. Sulla misura della velocità di propagazione delle perturbazioni sismiche in rapporto alla sismometria razionale. p. 15-18.
- Pizzetti, —. Intorno al calcolo della rifrazione astronomica, senza speciali ipotesi sul modo di variare della temperatura dell'aria coll'altezza. p. 73-81.
- Chella, Silvio. Misura del coefficiente di attrito interno dell'aria a basse temperature. p. 119-125.
- Chistoni, Ciro. Risultati pireliometrici ottenuti dal 22 agosto a tutto giugno 1903 al R. Osservatorio geofisico di Modena. p. 126-132.
- Monti, V. Sulla probabile origine della distribuzione dei temporali italiani a seconda delle stagioni. p. 173-175.

Chistoni, Ciro. Misure pireliometriche eseguite sul Monte Cimone nell'estate del 1902 e nell'estate del 1903. p. 208-213.

Teglio, Emilio. Contributo allo studio del pireliometro a compensazione elettrica dell'Angström. p. 214-216.

Monti, V. Sull'interpretazione matematica dei sismogrammi. p. 217-219.

Chistoni, Ciro. Misure pireliometriche eseguite sul Monte Cimone nell'estate del 1904 e nell'estate del 1905. p. 276-281.

Eredia, Filippo. La pioggia a Roma. p. 450-456. [Gives rainfall in extenso, by months, 1825-1906.]

Blaserna, —. Sulle esperienze degli spari contro la grandine, eseguite a Castelfranco Veneto negli anni 1902-1906. p. 680-682.

Revista marittima. Roma. Anno 4. Marzo 1907.

Penne, Renzo de la. Osservazioni di scariche elettriche dell'atmosfera. [Observations made aboard the *Calabria* in a voyage around the world.]

Società geografica Italiana. Roma. Serie 4. Vol. 7.

— La regione meno piovosa delle Alpi. (Feb., 1906.) p. 142-143.

— La rete meteorologica eritrea. (Feb., 1906.) p. 155.

Baratta, Mario. I terremoti di Calabria. (Maggio 1906.) p. 432-459.

Alessandri, Camillo. Due mesi sulla vetta del Monte Rosa. (Luglio 1906.) p. 639-662. [Account of Regina Margherita observatory, Monte Rosa.]

Tancredi, A. M. Nota sul clima del Serahè (Colonia Eritrea). (Dic. 1906.) p. 1192-1249. [Includes collected data for Adi-Ugri and Chenafanà.]

Baratta, M. Sulla distribuzione topografica dei terremoti nel Chili. (Gen. 1907.) p. 30-37.

Boletin de la Sociedad geográfica de Lima. Ano 16. Tome 19.

Victoria, Ernesto G. Evaporación y frío producido por ella en Lima. p. 1-58.

Castre, Emilio. El departamento de San Martín y nuestras regiones orientales. Conferencia dada en la Sociedad geográfica de Lima. p. 59-97. [Climate, p. 61-62.]

Hemel en dampkring. Den Haag. 4. Jaargang.

Kater, J. De groene straal bij op en ondergang der zon. p. 170-171.

M. Het siebeld van hooge drukking in de tweed helft van Januari dezes jaars. p. 171-173. [Includes charts Jan. 19-24.]

M. Weerkundige waarnemingen te de Bilt 1897-1906. p. 173-176. [Brief résumé 1897-1906.]

NORTH ATLANTIC WEATHER.

By MR. JAMES PAGE, Chief of the Division of Ocean Meteorology.

[Compiled from the daily observations, at Greenwich mean noon, furnished by cooperating observers at sea.]

The distribution of pressure over the North Atlantic Ocean at the instant of Greenwich mean noon of March 1 and the attendant circulation of the winds is shown on Chart X. Pressure is above the average over Iceland, 29.80 inches, and a marked anticyclonic area covers the eastern portion of the ocean and the western shores of the Continent of Europe. The latter feature of the pressure remained practically constant throughout the entire month, the minimum barometric reading at Ponta Delgada, Azores, during the period March 1-30 being 30.18 inches, recorded March 25, consequent upon a northward recession of the center of the high to the British Isles. Over the latter upon the same date readings of 30.40 inches and upward were recorded.

As a result of this special distribution of pressure the northeast trades blew throughout the entire month without interruption, extending in a continuous belt from the latitude of Cape Finisterre to the Line. At the entrance to the Channel and westward along the transatlantic routes as far as the meridian of 20° the winds blew almost continuously from the southwest quadrant, and fair weather prevailed. Upon one day only, viz., March 16, did these winds attain gale force, the result of a cyclonic storm central at the time in the vicinity of the Faroes, where the recorded pressure upon the date mentioned was 29.00 inches.

Over the western half of the ocean variations of pressure succeeded one another with marked rapidity, and as a consequence severe weather was the rule. The high central over New England yielded March 2 and was succeeded March 3 by a shallow low which extended eastward to mid-ocean. Upon this date the transatlantic routes between the meridians of 60° W. and 35° W. were accordingly visited by westerly gales, without, however, any decided change in the barometer.

Pressure over Iceland fell from 29.50 inches on March 2 to 28.90 inches on March 5, with the result that vessels following the route north about Scotland experienced southwesterly gales of force 10 and 11 during this period.

On March 5 a feeble area of low pressure moved eastward across Hatteras and on March 6 was central with a well developed system of cyclonic winds in the neighborhood of 37° N., 66° W., the lowest recorded pressure being 29.30 inches. From this point it moved northeastward, developing into a hurricane during the early hours of March 7.

The distribution of pressure and the circulation of the winds at Greenwich mean noon of this date are shown on Chart XI, the storm at this hour being central in latitude 42° N., longitude 56 W. Of the large number of vessels which experienced the hurricane's severity, the *Pretoria*, (German S. S., Schröter, report by 3d officer Suppelna), appears to have most nearly approached the center. The vessel was bound from Hamburg to New York, and at Greenwich mean noon of March 6 found herself in latitude 41° 55' N., longitude 53° 20' W. The remarks of the observer from this time forward are as follows:

"At 2 p. m. of March 6 the wind went from west, 2, to the southward, and so continued until 3 a. m. of March 7, with heavy rain squalls; lightning and thunder covering the whole sky. The wind then shifted to WSW., force 11, and at 6 a. m. to W., force 12, with a heavy hail squall. The lowest barometer, 725.0 millimeters (28.54 inches), occurred at 2 a. m., the position at the time being latitude 41° 51' N., longitude 57° 00' W., and the wind south, force 11".

The *Brandenburg*, (German S. S., Woltersdorff, Bremen to New York, report by officer Jaehnigen), also found herself within dangerous proximity to the storm center, altho in the